

Amendments to the Claims

Claims 1-63 (Canceled).

64. (New): A method of forming a trench isolation region comprising:

forming an isolation trench within semiconductive material of a semiconductive substrate; and

filling the isolation trench with electrically insulative material, the filling comprising an initially liquid deposition within the isolation trench, the filling comprising a subsequent initially solid deposition within the isolation trench.

65. (New): The method of claim 64 wherein the filling comprises forming an oxide layer over sidewalls of the trench prior to both of the initially liquid deposition and the subsequent initially solid deposition.

66. (New): The method of claim 64 wherein the liquid comprises a silanol.

67. (New): The method of claim 64 wherein the insulative material comprises silicon dioxide.

68. (New): The method of claim 64 wherein the liquid deposition lowers an aspect ratio of the trench from what was prior to the liquid deposition.

69. (New): A method of forming a trench isolation region comprising:

forming an isolation trench within semiconductive material of a semiconductive substrate;

providing a silicon comprising electrically insulative aspect ratio lowering material within the isolation trench to partially fill the isolation trench, said providing comprising a liquid deposition within the isolation trench; and

after providing the silicon comprising insulative aspect ratio lowering material, depositing an initially solid silicon comprising electrically insulative material within the isolation trench over the insulative aspect ratio lowering material.

70. (New): The method of claim 69 wherein the isolation trench comprises sidewall portions, and further comprising forming an oxide layer over the sidewall portions prior to both of the providing and the depositing.

71. (New): The method of claim 69 wherein the isolation trench comprises sidewall portions, and further comprising forming an oxide layer over the sidewall portions after both of the providing and the depositing.

72. (New): The method of claim 69 wherein the liquid comprises a silanol.

73. (New): The method of claim 69 wherein the liquid deposition partially fills the isolation trench with liquid.

74. (New): The method of claim 69 wherein the silicon of the aspect ratio lowering material and the insulative material is in silicon dioxide form.

75. (New): A method of forming a trench isolation region comprising:

forming an isolation trench within semiconductive material of a semiconductive substrate;

providing a material of a first composition within the isolation trench which partially fills the isolation trench and lowers an aspect ratio of the isolation trench from what was prior to said providing;

converting the first composition to a second composition which partially fills the isolation trench and is electrically insulative; and

after the converting, depositing an electrically insulative material within the isolation trench over the converted material.

76. (New): The method of claim 75 wherein the material of the first composition is liquid prior to the converting.

77. (New): The method of claim 76 wherein the liquid comprises

a silanol.

78. (New): The method of claim 75 wherein the isolation trench comprises sidewall portions, and further comprising forming an oxide layer over the sidewall portions prior to the providing.

79. (New): The method of claim 75 wherein the isolation trench comprises sidewall portions, and further comprising forming an oxide layer over the sidewall portions after the converting.

80. (New): The method of claim 75 wherein the isolation trench comprises sidewall portions comprising semiconductive material, and further comprising thermally oxidizing said sidewall portions.

81. (New): The method of claim 75 wherein the semiconductive material comprises bulk monocrystalline silicon.

82. (New): The method of claim 75 wherein the first composition, the second composition, and the insulative material each comprises silicon.

83. (New): The method of claim 82 wherein the silicon of the second composition and the insulative material is in silicon dioxide form.

84. (New): A method of forming a trench isolation region comprising:
 etching an isolation trench within semiconductive material of a semiconductive substrate;
 forming an oxide layer over sidewall portions of the isolation trench;
 after forming the oxide layer, flowing a liquid material to within the isolation trench;
 solidifying the liquid material to an electrically insulative solid;
 providing the electrically insulative solid to partially fill the isolation trench and reduce an aspect ratio of the isolation trench from what it was prior to the flowing; and
 depositing an electrically insulative material to within the isolation trench over the insulative solid within the isolation trench.

85. (New): The method of claim 84 wherein the liquid material comprises a silanol.

86. (New): The method of claim 84 wherein the providing comprises flowing the liquid material to partially fill the trench.

87. (New): The method of claim 84 wherein the solidifying comprises converting the liquid material from a first composition comprising a liquid to a second composition comprising a solid.

88. (New): The method of claim 84 wherein the solidifying comprises raising the temperature of the liquid material.

89. (New): A method of forming a trench isolation region comprising:
forming an isolation trench within a bulk semiconductive substrate, the trench having semiconductive sidewalls and a semiconductive base;
forming a first electrically insulative layer within the trench over the sidewalls and the base to less than completely fill the trench;
anisotropically etching the insulative layer effective to expose the semiconductive base;
substantially selectively chemical vapor depositing a second electrically insulative layer onto the semiconductive base and to less than completely fill the trench; and
forming a third electrically insulative layer within the trench over the first and second insulative layers.

90. (New): The method of claim 89 wherein the substantially selectively depositing comprises flowing a combination of ozone and TEOS to within the trench effective to deposit silicon dioxide.

91. (New): The method of claim 89 wherein the first insulative layer is formed by a thermal oxidation.

92. (New): The method of claim 89 wherein the first insulative layer is formed by chemical vapor deposition.

93. (New): The method of claim 89 wherein forming the third layer comprises flowing a liquid to within the trench.

94. (New): The method of claim 93 wherein the liquid comprises silanol.

95. (New): The method of claim 89 wherein the anisotropically etching of the insulative layer is effective to stop on semiconductive material of the base upon its exposure.

96. (New): A method of forming a trench isolation region

comprising:

forming an isolation trench within a bulk semiconductive substrate, the trench having semiconductive sidewalls and a semiconductive base;

forming a first electrically insulative layer over the sidewalls and the base to less than completely fill the trench;

flowing a liquid comprising material within the trench to overfill the trench;

solidifying and converting the liquid comprising material to a silicon dioxide comprising material which overfills the trench; and

after the solidifying and the converting, removing the silicon dioxide comprising material received at least outwardly of the trench.

97. (New): The method of claim 96 wherein the first insulative

layer is formed prior to the flowing.

98. (New): The method of claim 96 wherein the first insulative

layer is formed after the flowing.

99. (New): The method of claim 98 wherein the first insulative

layer is formed after the solidifying and the converting.

100. (New): The method of claim 96 wherein the removing

comprises chemical mechanical polishing.

101. (New): A method of forming a trench isolation region comprising:
 etching a shallow isolation trench into a semiconductive substrate, the trench having a first depth and a first width, wherein the ratio of the first depth to the first width defines an aspect ratio;
 forming a first layer of material within the trench, the first layer partially filling the trench and lowering the aspect ration and having a first composition; and
 converting the first composition to a second composition;
 after the converting, forming a second layer of material over the first layer, the second layer essentially filling the trench; and
 the etching into the substrate comprising etching to form the trench having sidewalls and a base that define a first depth and a first width and wherein a ratio of the first depth to the first width further defines a first aspect ratio.

102. (New): The method of claim 101 further comprising forming a layer of electrically insulative material adjacent the sidewalls and the base, the forming of the layer of electrically insulative material occurring prior to forming the first layer.

103. (New): The method of claim 101 further comprising oxidizing the sidewalls and the base, the oxidizing occurring subsequent to forming the first layer.

104. (New): The method of claim 101 further comprising forming a silicon oxide comprising layer adjacent the sidewalls and the base, the forming of the silicon oxide comprising layer occurring prior to forming the first layer.

105. (New): The method of claim 104 wherein the forming comprises a thermal oxidation of the sidewalls and base.

106. (New): The method of claim 105 wherein the thermal oxidation occurs prior to forming the first layer.